

DETAILED ACTION

Amendments made 9/10/09 have been entered.
Claims 1, 3-6, 10-16 and 18-34 remain pending.
Claims 32-34 were withdrawn.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3-6, 10-16, and 18-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (WO 02/30213 A1) in view of the combination of Gennadios (US 6214376 B1) and Lennox (Gelatin Alternatives in Gummi Confections) and Applicant's Admitted Prior Art (Background of the Invention, page 1 line 10 through page 2 line 18). It is noted that the previous rejection included Applicant's Admitted Prior Art in the body of the rejection, but not in the heading. The rejection remains essentially the same, although Applicant's admitted Prior Art has been included in the heading for clarification.

Jones teaches of a gummy food product comprising a gelled, gelatin free, water based shell and liquid center (abstract and page 2 lines 22-29). Jones teaches that the food product contains 10-90%, preferably 25-75% of the shell and 10-90%, preferably 25-75% of the liquid filling (page 4 lines 1-2).

Jones teaches that the shell comprises 0.5-5%, preferably 1-4% hydrocolloid, including carrageenan when the shell thickness is 2-10mm (page 2 line 31 through page 3 line 1). Jones teaches that the shell comprises 3-50%, most preferably 10-20% water and 50-97% solids, most preferably 75-85% solids (page 3 lines 1-10). Thus, based on a dry weight basis, the shell as taught by Jones comprises about 0.5-10% hydrocolloid, including carrageenan, (0.5% carrageenan/97% solids = about 0.5% carrageenan based on the total solids or dry weight; 5% carrageenan/50% solids = about 10% carrageenan based on the total solids or dry weight) most preferably about 1.2-5.3% hydrocolloid, including carrageenan (1% carrageenan/85% solids = about 1.2% carrageenan based on the total solids or dry weight; 4% carrageenan/75% solids =

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about 5.3% carrageenan based on the total solids or dry weight). Jones teaches that besides the hydrocolloid, the other main ingredients of the shell are water and sweetener, including a sugar substitute (page 3 lines 1-7). Thus, as the shell taught by Jonas consists essentially of 0.5-5% hydrocolloid, sweetener, and 3-50%, most preferably 10-20% water, one of ordinary skill in the art at the time the invention was made would expect that the shell as taught by Jones contain about 45-96.5% sweeteners (100% total composition -5% hydrocolloid-50% water =45.5% sweetener; 100% total composition - 5% hydrocolloid-3% water= 96.5% sweetener), most preferably about 76-89% sweeteners (100% total composition -4% hydrocolloid-20% water =76% sweetener; 100% total composition - 1% hydrocolloid-10% water= 89% sweetener), including sugar substitutes. Jonas teaches that the shell may also include small amounts of acids and buffers, which are known acidity regulators, and colorants (page 3 lines 1-7). Jonas teaches that the casing may be substantially transparent or opaque (page 2 line 10).

Jonas teaches that the liquid center may contain water, sweeteners including sugar and sugar substitutes, oil/fat, color, flavor, acid, minerals, vitamins, herbs (page 3 lines 15-21). Jones teaches that the solids content of the liquid center is 50-90%, most preferably 75-80% (page 3 lines 33-35), and thus the liquid content is 10-50% (100% total composition-90% solids = 10% liquid; 100% total composition-50% solids = 50% liquid), most preferably 20-25% (100% total composition-80% solids = 20% liquid; 100% total composition-75% solids = 25% liquid). As Jones teaches that the liquid center contains sweeteners, including sugar which is a solid, and water with other optional ingredients, one of ordinary skill in the art at the time the invention was made would expect that the liquid content of 10-50%, most preferably 20-25% in the center is water and the 50-90%, most preferably 75-80% solids is a sweetener, including sugar. Jones teaches that the viscosity of the liquid center is from 0.0089-159Pas at 25C (page 3 lines 19-21).

Jones is silent to the type of carrageenan used in the shell and to the ratio of kappa and iota carrageenan used in the shell as 60-90%, preferably 65-90%, most preferably 70-85% kappa carrageenan and 10-40%, preferably 10-35%, most preferably

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15-30% iota carrageenan as recited in claims 1, 5, and 6, to the optical density of the shell at a thickness of 3.5mm as 0.2 or less, preferably 0.1 or less as recited in claims 15 and 16, to the liquid center as including a flavored oil or chocolate as recited in claim 18, and to the viscosity of the liquid center as 0.01-180Pas at a temperature of 60-100C as recited in claim 24.

Gennadios teaches in gelatin free capsules for oral administration 0.5-12% kappa carrageenan is included in the shell composition (abstract). Gennadios teaches that in gelatin free capsules it was known to combine kappa and iota carrageenan (Column 3 lines 24-31). Gennadios teaches that 50% or 25% kappa carrageenan may be substituted by iota carrageenan in order to form a softer more elastic gel (Column 4 lines 14-20).

Lennox teaches that in gummi confections it is desirable for gelatin to be substituted with mixtures of kappa and iota carrageenan (pages 65 and 66 Introduction and page 71 Conclusions and Recommendations paragraph 2). Lennox teaches that the ratio of kappa to iota carrageenan includes about 53-82% kappa carrageenan to about 18-47% iota carrageenan (Figure 3 Run Numbers 6 and 10). Lennox teaches that the ratio of kappa to iota carrageenan alters the hardness, springiness, resilience, chewiness, gumminess, cohesiveness, hardness, stickiness, color, wetness, etc (Figures 4-7).

Applicant admits, specification page 1 lines 25-32, that carrageenan have been suggested as a replacement for gelatins but that only kappa and iota carrageenan have gelling properties.

Regarding the type of carrageenan used in the shell and the ratio of kappa to iota carrageenan in the shell, it would have been obvious to use iota and kappa carrageenan as the carrageenan in the shell taught by Jones since, as admitted by applicant, specification page 1 line 32, only kappa and iota carrageenan have gelling properties. It would have been further obvious to one of ordinary skill in the art at the time the invention was made to use 50-75% kappa carrageenan and 25-50% iota carrageenan in the shell in order to form a shell which was softer and more elastic as taught by Gennadios. Furthermore, as taught by Lennox, to alter the ratio of kappa and iota carrageenan in

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gummy products, such as the shell taught by Jones depending on the desired properties of the final product, including hardness, springiness, resilience, chewiness, gumminess, cohesiveness, hardness, stickiness, color, and wetness was well known and would have been obvious to one of ordinary skill in the art.

Regarding the liquid center as including a flavored oil or chocolate, Jones teaches that the liquid center may contain oil/fat as well as flavorings. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include flavor oil or solid flavors in the liquid center depending on the flavor desired in the final center filled composition. To use well known flavorants, such as flavor oils and/or chocolate, for their known purpose would have been obvious and common sense to one of ordinary skill in the art at the time the invention was made.

Regarding the optical density of the shell, Jones teaches that the shell is transparent or opaque, thus one of ordinary skill in the art at the time the invention was made would expect the shell as taught by Jones to encompass the optical density claimed. Furthermore, since Lenox teaches that hydrocolloids affect the clarity of gummy products and since the references of record teach of a gummy product with substantially the same composition, including the same hydrocolloids within the instantly claimed ranges and proportions, one of ordinary skill in the art at the time the invention was made would expect that the gummy product taught by the references of record have substantially the same properties, including optical density, as the instantly claimed shell. Additionally, as taught by Lenox, it would have been obvious to one of ordinary skill in the art at the time the invention was made to alter the ingredients of the product depending on the desired properties of the shell, including optical density. One would have been motivated to have a more clear shell if it was desirable for the consumer to see the filling within the shell and a less clear shell if it was not desirable for the consumer to see the filling within the shell.

Regarding the viscosity of the liquid center at 60-100C, as viscosity is a function of composition and since Jones teaches of a liquid center with substantially the same composition, including 10-50%, preferably 20-25% water and 50-90%, preferably 75-85% sugars as the instantly claimed composition, one of ordinary skill in the art at the

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time the invention was made would expect that the composition as taught by Jones posses the substantially same properties, including viscosity at 60-100C as the instantly claimed composition.

Response to Arguments

Applicant's arguments filed September 10, 2009 have been fully considered but they are not persuasive.

Applicant argues that the references of record do not teach of the newly added limitations, specifically the shell comprising in addition to kappa and iota carrageenan, water, and a sugar substitute in an amount of 45-88% by weight of the shell. Applicant's argument is not convincing as Jones teaches that the shell comprises hydrocolloid, including carrageenan, water, and about 45-96.5% sweeteners, most preferably about 76-89% sweeteners, including sugar substitutes, as discussed above; and as it would have been obvious for the carrageenan of Jonas to be comprised of kappa and iota carrageenan as discussed above.

Applicant also appears to be arguing that Jonas teaches of a casing and not a shell as instantly claimed. Applicant's argument is not convincing as a casing and a shell are synonymous terms and applicant has not pointed out any supposed differences between said terms.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KELLY BEKKER whose telephone number is (571)272-2739. The examiner can normally be reached on Monday through Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Kelly Bekker/
Examiner
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